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User's Guide

PCMCIA Card Drive
for
DeskTop PC

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(User's Guide)

Hardware Installation

IMPORTANT:
Installing the PCMCIA Card will require opening and manipulating your PC. Exercise caution at all times when working with AC powered and static-sensitive equipment. Turn off and unplug your PC and discharge any static electricity from your body by touching any metal surface of your PC before jumper setting and installation.

System requirements

The PCMCIA Card Drive requires a system conforming to the following specifications:
• IBM PC compatible computer with a minimum 80286 CPU. • Hard disk drive with at least 1 Mbyte free space. • One empty 16 Bit ISA bus card slot (The bus clock must be set 8 MHz or slower). • One empty 3.5 inch floppy disk drive bay. • DOS 5.0 or later. •Windows 3.1 or later, including Windows 95.

Package Contents

• Host Interface Adapter. • Drive unit. • Flat ribbon cable assembly. • Software installation diskettes. • User's Guide. • Mounting screws (4).

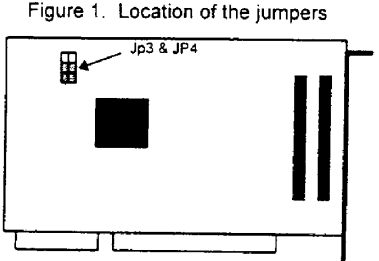
Jumper setting

There are two slots on a single PCMCIA Card Drive, however you may install 2,3,or 4 PCMCIA Card Drives in your PC. For this, you need to set 6 jumpers with a different setting for each PCMCIA Card drive. These jumpers are named JP3 and JP4. They are shown on the Host Interface Adapter in figure 1, and the jumper settings are shown on table 1.

Table 1. Jumper setting

PCMCIA Card Drive	JP3 & JP4	Slot NO.
The 1st PCMCIA Card Drive		(Default) 0 , 1
The 2nd PCMCIA Card Drive		2 , 3
The 3rd PCMCIA Card Drive		4 , 5
The 4th PCMCIA Card Drive		6 , 7

Figure 1. Location of the jumpers

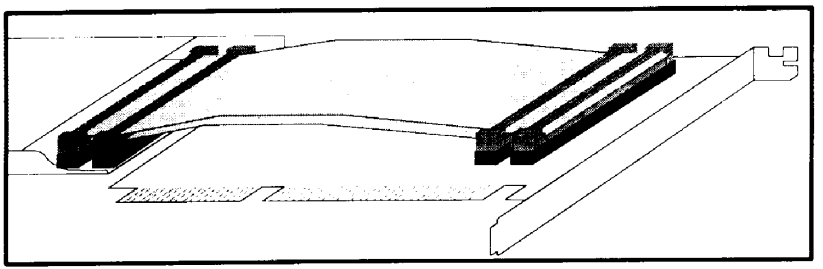


Note. If you install only one PCMCIA Card Drive, you do not need to adjust the jumper settings.

Installation

1. Turn off the power to your computer and all peripherals. Then remove your computer's cover.
2. Connect the Host Interface Adapter and the Drive Unit with the flat ribbon cable assembly provided. The flat ribbon cable assembly is keyed and will not allow incorrect insertion (refer to figure 2).
3. Install the Host Interface Adapter into any free 16 Bit ISA bus extension slot of your PC.
4. Slide the Drive Unit into the drive bay of your PC and secure it with the 4 screws provided.
5. Check that the cables are correctly connected on the Drive Unit and the Host Interface Adapters again and then fit your computer's cover.

Figure 2. **Flat Ribbon Cable connection**



Software Installation

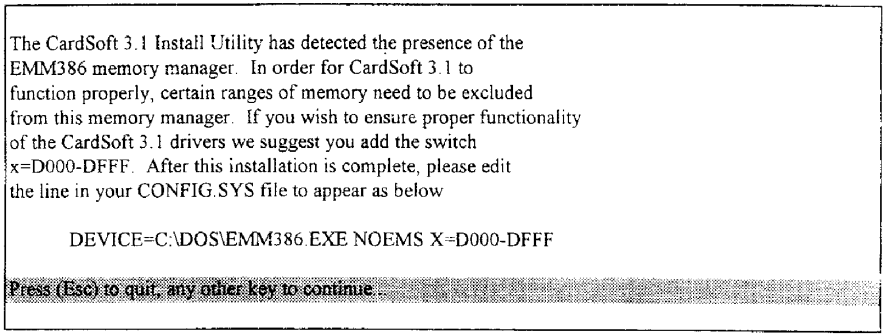
The PCMCIA Card Drive includes **CardSoft™**, a DOS PCMCIA services software library, and **CardView™**, a PCMCIA control & maintenance utility for Microsoft Windows. These utilities allow you to configure and control your PCMCIA cards easily while in Windows. **Windows 95** does not require CardSoft and CardView to access your PCMCIA cards.

Note: Please install the hardware of your PCMCIA Card Drive before installing software.

Installation for DOS & Windows 3.1X:

During the installation procedure, if one of the following memory managers is detected, a warning screen similar to the one shown below will be displayed. The appropriate DEVICE line changes for your memory manager are also shown on the screen:

EMM386 QEMM 386MAX


The CardSoft 3.1 Install Utility has detected the presence of the
EMM386 memory manager. In order for CardSoft 3.1 to
function properly, certain ranges of memory need to be excluded
from this memory manager. If you wish to ensure proper functionality
of the CardSoft 3.1 drivers we suggest you add the switch
x=D000-DFFF. After this installation is complete, please edit
the line in your CONFIG.SYS file to appear as below
DEVICE=C:\DOS\EMM386.EXE NOEMS X=D000-DFFF
Press (Esc) to quit, any other key to continue.

If this screen (or a similar screen) appears, note the displayed DEVICE line. When installation is complete, edit the memory manager DEVICE line in your CONFIG. SYS file to match the one displayed on this screen. To edit or display your CONFIG.SYS file, type **command Edit Config.sys** at the DOS prompt.

If the EMM386 memory manager is detected, the following line (or similar line) will be displayed on the installation screen:

device=emm386.exe

(if you do not see a line like this, then you are not using EMM386 on your system)
Change the line to the following:

device=emm386 exe noems x=d000-dfff

Doing this will exclude the address range D000-DFFF.

If you are using a memory manager other than those listed, refer to the manual that you received with the memory manager for instructions on how to exclude an address range.

The installation procedure is as follows:

1. Turn on the power to your computer. Insert the CardSoft diskette into drive A: or B:
2. **If you are usingWindows**, from the Program Manager, select **File**, then **Run**. When asked for a filename, type **A:\INSTALL** or **B:\INSTALL** and press Enter. **If you are using DOS**, type **A:\INSTALL** or **B:\INSTALL** from the DOS prompt and press Enter.

3. Follow the instructions that appear on your screen. If you have problems or questions, refer to the CardSoft User's Guide in the supplied diskette for help.
4. **If you are using** DOS, repeat steps 1 through 3 with the CardView diskette.
5. **If you are using Windows**, insert the CardView diskette into drive A: or B:. From the Program Manager, select **File**, then **Run**. When asked for a filename, type **A:\SETUP** or **B:\SETUP**.When the CardView program appears, follow the instructions that appear on your screen.

Your software installation is now complete.

Five document files are included on the supplied diskettes under the \DOC subdirectory.
These files are:

CSUG -DOC.EXE----CardSoft User's Guide
CVUG-DOC.EXE----CardView User's Guide
CSTR-DOC.EXE-----CardSoft Technical Reference
CSPH-DOC.EXE-----CardSoft Product Highlight
CSRN-DOC.EXE-----CardSoft Release Note

The above self extracting files will be decompressed to Word forWindows-format files by executing these files under DOS environment. CSUG & CVUG should be enough for standard user concerns. These are most commonly needed when there is a problem when using PC cards..

Installation for Windows 95:

Windows 95 contains built-in support for this PCMCIA Card Drive and does not require the supplied diskettes. However, the following procedure must be used upon initial hardware set-up:

1. From Windows 95, select **Start**, then **Settings**, then double click **Add New Hardware**. A Add New Hardware window will be displayed.
2. Double click on **PCMCIA socket**. A Manufactures & Model window will be displayed. Double click on **PCIC** or **compatible PCMCIA controller**. A Resource Type & Setting window will be displayed.
3. Select **Next**, then **Finish.** A System Settings Change window will be displayed.
4. Select **Yes** to reboot Windows 95.

Your software installation is now complete.

For more information, refer to the Windows 95 manual or Windows 95 on line help.

Using PC cards

This section describes how to use your PC cards with DOS or Windows 3.1X. For use with Windows 95, please refer to your Windows 95 manual.The instructions given are to be followed at the DOS prompt.

Before Using PC cards

Before using your PC card, verify the new installation by checking the following step by step:

Verify your CONFIG.SYS file: After software installation your CONFIG.SYS fileshould include command lines shown at right. Lines 5,6,7,8 and 11 are included only when the supplied disk contains optional Flash File System II (FFS2). FFS2 is required for using Flash card.

```
DEVICE=C:\CARDSIFT\SS365SL.EXE
DEVICE=C:\CARDSOFT\CS.EXE
DEVICE=C:\CARDSOFT\CSALLOC.EXE
DEVICE=C:\CARDSOFT\ATADRV.EXE
DEVICE=C:\CARDSOFT\MTAA.EXE
DEVICE=C:\CARDSOFT\MTAB.EXE
DEVICE=C:\CARDSOFT\MTI1.EXE
DEVICE=C:\CARDSOFT\MTI2P.EXE
DEVICE=C:\CARDSOFT\MTSRAM.EXE
DEVICE=C:\CARDSOFT\MTDDRV.EXE
DEVICE=C:\CARDSOFT\MS-FLASH.SYS
DEVICE=C:\CARDSOFT\CARDID.EXE
```

Make sure CardSoft and CardView are successfully loaded: After verifying your CONFIG.SYS file, reboot system. Make sure there are no errors when these device drivers are loaded.

Check resource for CardSoft: A CSALLOC Utility scans the system for available memory (MEM), I/O Port (IOP), and Interupt Request Line (IRQ) resource which can be used by your PC cards. To see what resource your PC card can use, from the C:\CardSoft directory, type **CSALLOC/d** and press Enter. A list similar to the following will be displayed:

MEM=D000-DFFF
IO=108-1EF, 1F8-377, 380-3EF, 970-977, B70-B77, D70-D77, F70-F77
IRQ=3,5,A-C,E,F

None of the 3 lines can be absent

Card Insertion & System Beeps

When you insert a card, your system emits a beep code to let you know whether or not the CardSoft software was able to recognize and configure the card. These beep codes are:

Medium tone followed by high tone beep: The PC card was recognized and successfully configured when inserted.

Single low tone beep: The PC card was recognized, but not successfully configured when inserted. When you hear a single low tone, it means the card will not work. You may have to change your system configuration or CardSoft configuration to get the card to work. Please refer to the *Trouble Shooting* section at the end of this User's Guide.

Also, when you remove a card, you should hear a high tone followed by a medium tone. This indicates that CardSoft is aware that the card has been removed.

Using ATA cards

Just as your system's hard disk has a drive letter (C) assigned to it, your ATA cards have letters assigned to them. You can find out which drive letters have been reserved for your ATA cards by using CARDINFO. To

do so, insert the ATA card into a PCMCIA slot. Then, from the C:\CardSoft directory, type **CARDINFO *N*** and press Enter. A list similar to the following will be displayed:

Slot 0:
(Card Information)
Card Type="ATA Disk" (Drive D:) ← **Drive letter is listed here.**
Manufacturer= <Vendor Name>
Product Name=<Vendor Product Name>

If necessary, just as with your system's hard disk, you can use DOS command FORMAT to format your ATA cards. All standard DOS commands will work with your ATA cards.

Using SRAM cards

To find out which drive letters have been reserved for your SRAM cards, from the C:\CardSoft directory, type **MTDDRV/?** and press Enter. A message similar to the following will be displayed:

Drive D is partition number 00 for slot number 00
Drive E is partition number 00 for slot number 01

In the above example, drive letter D is reserved for slot 0, and drive letter E is reserved for slot 1. Then if necessary, you can use these drive letters and DOS command FORMAT to format your SRAM cards as you would a floppy diskette. All standard DOS commands will work with your SRAM cards.

Using FLASH cards

For using Flash cards, an optional Flash File System II is required. Refer to section *Before Using PC cards/Verify your CONFIG.SYS file* in this User's Guide. The drive letter of Flash cards are the same as SRAM cards. To format your Flash cards, you need to run a supported utility MEMCARD. A function manual will then be displayed. You will only need to use two functions: **Erase** (5th function) and **Format** (2nd function). Erase first and then Format. After formatting your Flash cards, all DOS commands will work with them except CHKSK & FORMAT.

Using LAN cards

If your LAN card was recognized, but not successfully configured when the card was inserted (one beep), you may use a client driver (supplied by your LAN card vendor) to configure your LAN card. (Please consult this client User's Guide for configuring procedures). When your LAN card has been recognized and successfully configured (two beeps), from the C:\CardSoft directory, type **CARDINFO *N*** and press Enter. A list similar to the following will be displayed:

Slot 0:
(Card Information)
Card Type = "Ethemet"
Manufacturer = <Vendor Name>
Product Name = <Vendor Product Name>
(Configuration Info)necessary for runing Network software
configuring client handle is A65C
Memory+I/O interface, Vcc 50, Vpp1 50, Vpp2 50
Cofig base 0100, Config value:
Option value:60
Status value:00
Copy value:00
First I/O range 300-30F, 8-bit←
Second I/O range 310-31F, 16-bit←
Assigned IRQ is 5 (enabled)←

After being configured, you can see your LAN card like a ISA bus LAN adapter which is configured with specified I/O range and IRQ by jumper setting. In this sample, your ethernet card is configured with two I/O range (300-30F & 310-31F) and a IRQ No.5. The I/O range and IRQ assignment of your Network Software must agree with these configured I/O range & IRQ, or else your Network Software will not work properly.

Using FAX/MODEM cards

When your FAX/MODEM card has been recognized and successfully configured (two beeps), from the C:\CardSoft directory, type **CARDINFO *N*** and press Enter. A list similar to the following will be displayed:

Slot 0"
(Card Information)
Card Type = "Modem" (COM#)←
Manufacturer = <Vendor Name>
Product Name = <Vendor Product Name>
(Configuration Info)
Configuring client handle is A5B7
Memory+I/O interface, cc 50, Vpp1 50, Vpp2 50
Cofig base 0100, Config value
Option value:62
Status value:08
I/O range 3E8-3EF, 8-bit
Assigned IRQ is 5 (enabled)←

In this sample, your Fax/Modem card is configured with COM 3 & IRQ 5, then the COM port and IRQ assignment of your communication software, such as Bit/COM, etc. must agree with these configured COM port & IRQ, else your communication program will not work. Normally your PC has resident COM ports and IRQs for other devices, such as Mouse. They are COM1/IRQ4 and COM2/IRQ3. Unless your PC does not have these resident COM ports. CardSoft will not configure your Fax/Modem card with these COM ports & IRQs to avoid conflicting with other device in your PC.

Using Other PC cards

If your PC card was recognized but not successfully configured when the card was inserted (one beep), you may use a client driver (supplied by your PC card vendor) to configure your PC card. (Please consult

this client User's Guide for configuring procedures). When your PC card has been recognized and successfully configured (two beeps), from the C:\CardSoft directory, type **CARDINFO *N*** and press Enter. A list similar to that in the *Using LAN cards* section will be displayed and show you what I/O range (one or two ranges) & IRQ your PC card is configured with. The I/O range & IRQ assignment of the supplied software driver of your PC card must agree with the configured I/O range & IRQ or else your PC card will not work properly

Trouble Shooting

PROBLEM	ORIGINATION	POSSIBLE CAUSE(S)
If you see a window with a list such as: Intel 82365SL Socket Service Databook Socket Service Cirrus Socket Service VLSI Socket Service Intel 82365LP Socket Service IBM 720 Socket Service Not Install Socket Srevice	software installation	• your Host Interface Adapter is not correctly installed • or the jumper setting is not default value • or the fefault value (I/O address) is also used by other Adapter card • or your Host Interface Adapter is defective
If you see either of the two messages: • ***Installation Failed • Intel 82365SL PCMCIA Adapter not found	system booting	• there is a conflict with other PCMCIA software other than CardSoft • or your Host Interface Adapter is defective
Two beeps and DIR error	ATA card	• your ATA card may not have been formatted. Please format it
Two beeps but cannot be formatted	ATA card	• your ATA card may not have been partitioned. For this, From C:\CardSoft directory, key in **ATAINIT** <drive letter> and press Enter. Then follow the instructions as they appear on your screen. For more information about ATAINIT, refer to Chapter 3 of CardSoft User's Guide.
Two beeps but cannot be partitioned	ATA card	• your ATA card is defective
One beep	ATA card	• CardSoft does not support your ATA card • or your ATA card is defective
Two beeps with DIR error	SRAM card	• your SRAM card may not have been formatted • or incorrect CardSoft installation
Two beeps but cannot be formatted	SRAM card	• your SRAM card is defective • or incorrect CardSoft installation
One beep	SRAM card	• your SRAM card is defective • or incorrect CardSoft installaion

Two beeps with DIR error	FLASH card	• your FLASH card may not have been formatted • or incorrect CardSoft installation
Two beeps but cannot be formatted	FLASH card	• your FLASH card is defective • or incorrect CardSoft installation
One beep	FLASH card	• FLASH memory chip on your FLASH card is not supported by CardSoft • your FLASH card is defective • or incorrect CardSoft installation CardSoft only support the FLASH cards which are built with INTEL series 1 (or compatible), INTEL series 2, AMD type B FLASH chips.
Two beeps but there are no configured COM ports	FAX/MODEM card	There may be four resident COM ports in your PC, consult the user's manual of your PC to know how to disable some of your COM ports
Tow beeps but there is no configured IRQ	FAX/MODEM card	Please refer to section *Using CSALLOC* in Chapter 2 of the CardSoft User's Guide
Two beeps but the configured COM port and IRQ are not suited for you communication software	FAX/MODEM card	Please refer to section *Using CSALLOC* and *Using the Configuration Utility* in Chapter 2 of the CardSoft User's Guide
Two beeps and the configured COM port and IRQ agree with the COM port and IRQ assignment of your communication software, but communication software does not work properly	FAX/MODEM card	The configured IRQ may conflict with other devices being used in you PC. Please refer to section *Using CSALLOC* in Chapter 2 and *Customizing you System* in Chapter 5 of the CardSoft User's Guide
One beep	FAX/MODEM card	• your Fax/Modem card is defective • incorrect CardSoft installation Refer to section *Before Using PC cards* in this User's Guide
Two beeps but there are no configured I/O range or IRQ	LAN card	Plese refer to section *Using SCALLOC* in Chapter 2 of the CardSoft User's Guide
Two beeps but the configured COM port or IRQ are not suited for your Network software	LAN card	Please refer to section *Using CSALLOC* in Chapter 2 and *Customizing you System* in Chapter 5 of the CardSoft User's Guide
Two beeps and the configured I/O range and IRQ agree with the I/O range and IRQ assignment of your network software, but network software does not work properly	LAN card	The configured I/O range or IRQ may conflict with other devices being used in you PC. Please refer to section *Using CSALLOC* in Chapter 2 and *Customizing your System* in Chapter 5 in the CardSoft User's Guide
The client driver supported by LAN card vendor configure fail	LAN card	Please refer to section Using CSALLOC in Chapter 2 and Customizing you System in Chapter 5 of the CardSoft User's Guide. Check if there is system resource for the client driver to configure your LAN card

For problems with other cards, please refer to trouble shooting of LAN cards.